DETERMINISTIC PREDICTION IN AN IMAGE PROCESSING SYSTEM

Abstract of the Disclosure

Embodiments of the present invention relate to deterministic prediction in an image processing system. One aspect relates to an image processing system having a deterministic prediction decode unit for predicting individual pixels of an image based on a predetermined deterministic prediction algorithm. The deterministic prediction decode unit includes a look-up table, organized into four spatial phases, for storing values to be used by the predetermined deterministic prediction algorithm when converting a relatively low resolution image to a relatively higher resolution image. A prediction is made for a target pixel by accessing at least two of the four spatial phases of the look-up table to read at least two possible values of the target pixel. In one embodiment, the value of two target pixels can be provided within a same clock period, thus allowing for the decoding of two spatial phases with each access to the look-up table.